

IFPS16.2 (Full)
Installation Instructions
Tuesday, January 4, 2005

Installation Instructions for IFPS16.2

Table of Contents:

PART 0: Prerequisites.....	Page 3
PART 1: Pre-install Preparations.....	Page 5
PART 2: Install IFPS16.2	Page 7
PART 3: Post-Install Instructions for IFPS16.2	Page 12
PART 4: Deinstall Instructions for IFPS16.2	Page 15
Attachment 1: New/Merge/Replace File List for IFPS16.2.....	Page 18
Attachment 2: IFPS16.2 Install Space (<u>What if you don't have enough space?</u>).....	Page 30
Attachment 3: Sample IFPS Install Log File (<u>URL provided</u>).....	Page 31
Attachment 4: Customer Support Team (CST) Contact List.....	Page 32

PART 0: Prerequisite

Part 0 represents the portion of the IFPS16.2 install that can be done/verified prior to actually starting the install. Please read over this section and complete the items listed below. You should not continue with the IFPS16.2 install until all of these items have been satisfied.

1. **AWIPS Version Installed**

- a. At least AWIPS **OB3** and exactly **IFPS15.3** **MUST** be installed. On ds1 you may perform the following two (2) steps as any user (e.g., awipsusr, ifps, etc.)

- (1) To determine AWIPS release currently on your system, type the following command on any host:

```
> cat /awips/Release_ID
```

If the result does not match at least OB3, please install OB3 before continuing with the IFPS16.2 install or contact Robert (Bob) Rood at (301) 713-0211 x 177.

- (2) To determine the IFPS release currently on your system, type the following command on any host:

```
>cat /awips/IFPS_Release_ID
```

If the result does not match exactly IFPS15.3, then please [install IFPS15.3](#), before continuing with the IFPS16.2 install.

2. Important Note: **Backup (i.e., make copies of) Important IFPS Files**

- a. See Attachment 1 for the list of data files, scripts, and database tables that are replaced or merged during the IFPS16.2 upgrade.
- b. Key files that MDL suggests should be backed up prior to starting the IFPS16.2 upgrade appear below. Please note that these files should be owned by user ifps, not root or awipsusr.

- (1) Data files and Scripts

1. /awips/adapt/ifps/localbin/ifps-ccc.env

3. **Warning:** The contents of /awips/GFESuite on PX and LX workstations will be populated with baseline GFESuite software. SITE and User configurations in /etc/SITE and data/databases will be preserved, but changes made elsewhere may not be preserved. **Please make backup copies of any site-created directories/files, or temporarily save them off to another location.**

Also, /awips/ifps/primary and /awips/ifps/svcbu directories on the LX workstations will be wiped out and replaced with IFPS16.2 software from px1. If you have any local software under /awips/ifps/primary or /awips/ifps/svcbu that does NOT exist on px1, **please make backup copies of these files or temporarily save them off to another location.**

4. **Warning:** There is a risk of '/awips/GFESuite' getting erased on RPP machines.

If you have any RPP machines attached to AWIPS network, please do the following steps to ensure that the contents of /awips/GFESuite directory and/or other important files are not erased from your RPP machine(s).

- a. As user root on px1, source /etc/rc.config.d/AWIPS file and look up \$LX_WOKRSTATIONS variable.
- (1) > ./etc/rc.config.d/AWIPS
 - (2) > echo \$LX_WORKSTATIONS
- If your RPP machine(s) is listed under \$LX_WORKSTATIONS, please edit the /etc/rc.config.d/AWIPS file, and modify the “export LX_WORKSTATIONS=” line, and delete your RPP machine from that list. The install script uses this variable to perform all install/upgrade on LX machines.

PART 1: Pre-install Preparations

Part 1 represents the steps necessary to prepare the system for the IFPS16.2 install. Part 1 through Part 3 within the install instructions need to be completed on the same day. It is estimated that the Part 1 and Part 2 will take approximately 90 minutes to complete. The time required for Part 3 depends on the amount of time it will take your site to verify the IFPS16.2 upgrade.

NOTE: During this installation, IFPS updates the contents of '/awips/GFESuite', '/awips/ifps/', and '/awips/adapt/ifps/bin' on all PX and LX machines. Therefore, please save off any locally created software that you might have under these directories to another location. This installation attempts to preserve any locally created software, however no guarantee is made regarding the preservation of locally created software.

Please follow the directions listed below.

1. **Be sure to look for addenda to the IFPS16.2 Install Instructions**
 - a. ***Before starting with the IFPS16.2 install, please review any updated Install Instructions and/or Lessons Learned at the following URL:***

<http://www.nws.noaa.gov/mdl/icwf/IFPS16.2Full/IFPS16.2Full.html>

The IFPS16.2 web page includes a number of other hypertext links including a link to the IFPS16 User's Guide.

2. **IFPS16.2 Install Space**
 - a. The chart in **Attachment 2** indicates the amount of space needed in each of the partitions for the specified host. If there is not enough space available, the install will stop in order to allow the IFPS-FP to free up space in the specified partition. The install can then be re-run. To save time during the installation, this chart may be used as a pre-install check of available space. All sizes are in kb.
 - b. If you need to clear up space under /data/adapt partition, you can safely delete some of the old IFPS and GFESuite backup files located under /data/adapt/ifps/backup directory. Backup files from IFPS14 or earlier (such as GFESuite14.tgz) can safely be removed.
3. **Partition permissions**
 - a. Make sure your critical partitions have correct permissions and ownership.
 - i. On all PXs and LXs, cd to /awips/ and check that permission to ifps and GFESuite directories are correct.
 - (1) >cd /awips
 - (2) >ls -al

Sample:

```
drwxrwxr-x  4  ifps  fxalpha  4096  Aug 27 15:02 GFESuite
drwxrwxrwx  4  ifps  fxalpha  4096  Aug 27 15:05 ifps
```

- ii. If the permissions and ownerships are not the same as shown above, change them as root.

- (1) >su root
- (2) >chmod 775 /awips/GFESuite
- (3) >chown ifps:fxalpha /awips/GFESuite
- (4) >chmod 777 /awips/ifps
- (5) >chown ifps:fxalpha /awips/ifps

4. **IMPORTANT: ssh ability between px1 and all hosts**

- a. Please make sure that you can ssh from px1 to all other PXs (including px1 itself) and all the LXs as both user **root** and **ifps**. This is important because IFPS install scripts will need to connect to other machines to install software and without proper permissions, it will fail.

- i. As user 'root', verify the following ssh routes. You should be able to ssh without error and without being prompted for a password.

- (1) px1 to ds1
- (2) px1 to ds1-ccc (where ccc=wfo id)
- (3) px1 to px1
- (4) px1 to px1-ccc (where ccc=wfo id)
- (5) px1 to px2
- (6) px1 to px2-ccc (where ccc=wfo id)
- (7) px1 to lx1..lxn (each workstation defined in \$LX_WORKSTATIONS)
- (8) px1 to lx1-ccc..lxn-ccc (where ccc=wfo id; each of your workstations defined in \$LX_WORKSTATIONS)

- ii. As user 'ifps', verify the following ssh routes. You should be able to ssh without error and without being prompted for a password.

- (1) px1 to ds1
- (2) px1 to ds1-ccc (where ccc=wfo id)
- (3) ds1 to px1
- (4) ds1 to px1-ccc (where ccc=wfo id)
- (5) px1 to px1
- (6) px1 to px1-ccc (where ccc=wfo id)
- (7) px1 to px2
- (8) px1 to px2-ccc (where ccc=wfo id)
- (9) px1 to lx1..lxn (each workstation defined in \$LX_WORKSTATIONS)
- (10) px1 to lx1-ccc..lxn-ccc (where ccc=wfo id; each of your workstations defined in \$LX_WORKSTATIONS)
- (11) lx1..lxn to px1 (each workstation defined in \$LX_WORKSTATIONS)
- (12) lx1..lxn to px1-ccc (where ccc=wfo id; each of your workstations defined in \$LX_WORKSTATIONS)

WARNING: Make sure that when you issue the ssh commands, it does not ask you to enter a password. If it does, then your secure shell public/private keys may not be set up properly. Please contact the NCF and correct this before starting the install!

IMPORTANT: If you have any questions regarding this step, please contact NCF before continuing with the install. It is imperative that ssh functionality is tested before starting with the install.

5. Read permissions on files residing under ~ifps/localbin, ~ifps/data and ~ifps/Xdefaults.
 - a. Since the install of IFPS16.2 will be started from px1, it is necessary to make sure directories under /awips/adapt/ifps have correct permissions. This is necessary so that install scripts can backup appropriate files.
 - b. Please make sure that all the files residing under /awips/adapt/ifps/localbin, /awips/adapt/ifps/data and /awips/adapt/ifps/Xdefaults have world readable permission.
 - c. If you are unsure about whether files contain proper permissions, you can issue the following commands as user root on ds1:
 - i. > cd /awips/adapt/ifps
 - ii. > chmod -R 777 localbin Xdefaults data
6. Change the permission of /data/adapt/ifps/backup
 - a. Login to ds1 as user ifps
 - b. Issue the following commands to change permissions
 - i. >chmod 777 /data/adapt/ifps
 - ii. >chmod 777 /data/adapt/ifps/backup

PART 2: Install IFPS16.2

Part 2 represents the steps necessary to install IFPS16.2. **Part 1 through Part 3 within the install instructions need to be completed on the same day.** MDL estimates Part 2 will take 80 minutes to complete. The time required for Part 3 depends on the amount of time it will take your site to verify the IFPS16.2 install.

Please follow the directions listed below.

1. Notify the NCF

- a. Before starting the IFPS16.2 installation, please open a trouble ticket with the NCF. Should you require any assistance with your installation of IFPS, a trouble ticket will already be opened.
- b. **During normal Eastern Time business hours, if you have any problems with your IFPS installation or have questions about anything related to the installation process, then please contact:**
 - Carl McCalla, Sr. at (301) 713-1065 x169 or
 - Iris Boon at (301) 713-1774 x183
- c. If you encounter any operational problems with IFPS, after successfully installing and after closing your installation Trouble Ticket, then, as usual, contact the NCF at (301) 713 -9344.

2. Ensure System is running

- a. Log into a workstation as root, then ssh to the ds
 1. `> ssh ds1`
- b. Use the following command to verify that Informix is up and running correctly.
 - `> onstat -g dri`
 1. If you get a response this means that the Informix database is running.
 2. Using the output from the command above, verify that under the **Data Replication** heading, the type is primary and the state is on as indicated below.

*Informix dynamic server 7.31.UC2 – On-Line (Prim)–up 012319 –
168592 kbytes*

Data Replication:

<i>Type</i>	<i>state</i>	<i>paired serve</i>	<i>const dr ckpt</i>	<i>id/pg</i>
<u>primary</u>	<u>on</u>	<u>ONLINE_REP 126615/14</u>	<u>28</u>	

DR interval 30

DR interval 30

DR interval 30

DR auto 0

DRLOST FOUND /opt/informix/etc/.dr.lostfound

NOTE: If (1) or (2) above are not true, you have a problem and need to start the Informix database before you proceed. Call the NCF for assistance.

- c. Verify that the PX, DS, or AS are not currently failed over. You will **not** be able to complete this install, if one of the PX, DS, or the AS servers is failed over.
- As user root, to check whether or not DS/AS are in failover mode, use the cmviewcl command.
 - IF YOU DO NOT HAVE THE DX AND NAS INSTALLED: As user root, to check whether or not PXs are in failover mode, use the clustat command.
 - If you DO have the DX and NAS installed: As user root, to check whether or not PXs are in failover mode, use the hb_stat command.

Sample Output of cmviewcl:

```
CLUSTER  STATUS
awips    up
```

```
NODE     STATUS  STATE
as1-ggw  up      running
```

```
PACKAGE  STATUS  STATE  PKG_SWITCH  NODE
as1swap  up      running  enabled    as1-ggw
```

```
NODE     STATUS  STATE
as2-ggw  up      running
```

```
PACKAGE  STATUS  STATE  PKG_SWITCH  NODE
as2swap  up      running  enabled    as2-ggw
```

```
NODE     STATUS  STATE
ds1-ggw  up      running
```

```
PACKAGE  STATUS  STATE  PKG_SWITCH  NODE
dsswap   up      running  enabled    ds1-ggw
```

```
NODE     STATUS  STATE
ds2-ggw  up      running
```

Sample Output of clustat:

Cluster Status Monitor (awips)

14:36:14

Cluster alias: Not Configured

===== M e m b e r S t a t u s =====

Member	Status	Node Id	Power Switch
px1-ggw	Up	0	Good
px2-ggw	Up	1	Good

===== H e a r t b e a t S t a t u s =====

Name	Type	Status
px1-beat <--> px2-beat	network	ONLINE
/dev/ttyS1 <--> /dev/ttyS1	serial	ONLINE

===== S e r v i c e S t a t u s =====

Service	Last Status	Monitor Owner	Restart Transition	Interval	Count
px1apps	started	px1-ggw	13:04:49 Sep 22	0	0
px2apps	started	px2-ggw	13:09:18 Sep 22	0	0

Sample Output of hb_stat:

Heartbeat Status Monitor Dec 01 16:46:42

===== M e m b e r S t a t u s =====

Member	Status	IP address
px1-nhda	Up	165.92.21.7
px2-nhda	Up	165.92.21.8

===== S e r v i c e S t a t u s =====

Service	IPaddr	Cronfile	Owner	Start Time
px1apps	165.92.21.63	px1cron,SITEpx1	px1-nhda	2004-11-23 21:05:26
px2apps	165.92.21.64	px2cron,SITEpx2	px2-nhda	2004-11-23 21:19:57

- d. Verify that the site is not in service backup mode.
 (To verify site is not in service backup mode, check that
 /awips/adapt/ifps/bin/.svcbuMode file does not exist. If this file exists, please run service
 backup cleanup script from Fix-It Menu to exit service backup mode).

3. Install IFPS16

- a. Verify that IFPS and WWA are **NOT** running on any workstation in the office. This includes HP as well as Linux workstations.
- b. Ensure the ifpServer and ifpServerWatcher processes **are running on px1**. You can use this command to make this determination:

```
> ps -fu ifps
```

If either is not running, then **as user ifps**, perform these two commands, substituting your site id for the ccc':

```
> cd /awips/ifps/primary/bin
```

```
> start_PX_ifps_servers ccc
```

- c. Install IFPS16.2.

1. Insert the CD labeled "IFPS16.2" into the CD drive on px1

2. **NOTE:** First, close out any terminal you may have logged into as user ifps. If you are on one of the workstations, then open a new terminal as user **root** and then ssh into **px1**. Please be sure to be user root **before** ssh'ing from the workstation to px1.

3. Start a window to enter commands and make sure you are **user root**. You may choose to open a second window in case you need to enter other commands.

4. Mount the CD drive on **px1** as user **root**,

```
> mount /mnt/cdrom
```

This will mount the IFPS16.2 CD in /mnt/cdrom directory on px1.

5. In the same window, start the script to log install progress (**VERY IMPORTANT**)

Verify the log directory exists:

```
> ssh ds1 -n "ls -l /data/adapt/"
```

If directory "inslogs" is not shown, create it as follows:

```
> ssh ds1 -n "mkdir /data/adapt/inslogs"
```

```
> ssh ds1 -n "chmod 777 /data/adapt/inslogs"
```

Now create the log file:

```
> ssh ds1 -n "touch /data/adapt/inslogs/installIFPS16.2.out"
```

```
> ssh ds1 -n "chmod 777 /data/adapt/inslogs/installIFPS16.2.out"
```

```
> script -a /data/adapt/inslogs/installIFPS16.2.out
```

```
> cd /mnt/cdrom
```

6. In the same window, run **"/installIFPS"**. Remember this command needs to be executed as **root** on the **px1**. This script needs to run to completion (i.e., the command line prompt returns). Do not <cntrl>C out of this script unless you are directed to do so by NCF or MDL personnel!!!

```
> ./installIFPS
```

- a. There are a few error checks that may appear during the IFPS16.2 install. These error checks will stop the install until the problem is resolved.

- i. The first few checks verifies that there is enough space to install IFPS16.2 on all needed partitions. If there is not enough space, then the install will stop while this area is cleaned up. Once the directory has been cleaned, you can start the install by issuing the above command again.

- ii. The second check verifies that no sessions are connected to the ifps_ccc and wwa_ccc databases. If this check determines that

there is a session connected to this database, it will try to kill the connected processes. But as a precaution, you should always make sure that you are not running any IFPS or WWA processes on any of the HP or Linux workstations.

- iii. The install script will also check if all the IFPS services are added correctly. If they are not, install script will fail and ask you to correct it.

- 7. When the command line prompt is returned, the install script has finished. (The last few lines should indicate that install has finished.) Please finish the installation by performing the following step(s).
- 8. Type in 'exit' in the same window you issued the above commands to stop the script.

> exit

4. **Review your IFPS16.2 install log**

>cd /data/adapt/inslogs

>more installIFPS16.2.out

Look for any errors in the log file. **Please be aware that some errors may be safely ignored.** Examples of such errors are listed below.

- a. bash: /root/.bashrc: Permission denied
- b. mv: setting permissions for
`/data/adapt/ifps/backup/ifps_okx.tgz': Operation not permitted
- c. SQL -206: The specified table (station_directory) is not in the database.
ISAM -111: ISAM error: no record found.
SQLSTATE: 42000
- d. SQL -201: A syntax error has occurred.
SQLSTATE: 42000
- e. /awips/ifps/primary/bin/sqlcmd: No such file or directory
- f. line 163: 9767 Segmentation fault read_instructions
\$update_flag -input \$ins_files
- g. ls: *ccc: No such file or directory
- h. ls: ifps-*: No such file or directory
- i. /awips/GFESuite/ifpsinstall/install/misc_commands.sh:
/awips/ifps/primary/bin/sqlcmd: No such file or directory
- j. ERROR: Unable to locate a recent netCDF file in
/data/fxa/point/mos/ETA/netcdf/
- k. shell-init: could not get current directory:
getcwd:cannot access parent directories:No such file or directory

Please click on the link below and take a look at an example of a successful IFPS16.2 install log file. The instances in that sample log file where instructions indicate the NCF should be contacted should be ignored and if you encounter similar instances in your log file, they should also be ignored.

<http://www.nws.noaa.gov/mdl/icwf/IFPS16.2Full/installIFPS16.2Full.out>

If you have a questions about anything related to the install process, call the NCF for assistance. Also take a look at the Lessons Learned section of the IFPS16.2 web page at:

<http://www.nws.noaa.gov/mdl/icwf/IFPS16.2Full/IFPS16.2Full.html#LessonsLearned>

When the install is completed, please call the NCF and close the trouble ticket you opened to begin this process.

5. Unmount & remove the IFPS16.2 CD

```
> cd  
> umount /mnt/cdrom
```

Take the IFPS16.2 CD out of the drive by pressing the eject button on the CD-ROM drive.

PART 3: Post-Install Instructions for IFPS16.2

Part 3 represents the steps necessary to verify the IFPS16.2 install. These steps are not comprehensive, but are enough to verify that the basic system functionality is up and running. This part of the install instructions includes a list of items that MDL/FSL recommend be completed immediately after the IFPS16.2 install. This list is meant to focus the IFPS Focal Point on particular pieces of the software that were changed during the IFPS16.2 install. Although MDL/FSL attempts not to overwrite the local site's configuration of IFPS, it is, nevertheless, possible for this to occur. This part of the install instructions should lead the IFPS Focal Point to verify whether or not the site configuration was lost. This section will closely parallel the information listed in Part 0. If the site performed the necessary backup of the data referenced in Part 0, then the verification and any necessary updates should go smoothly at this time. The last part of this section includes a list of items that will need to be configured. Note, the site may elect to perform this configuration at a later time.

Please follow the directions listed below.

1. Verify System Functionality

- a. Verify that the IFPS servers started correctly

- (1) On px1 as ifps

- i. Check for the IFPS Servers (ifpServer, and ifpServerWatcher)
>ps -ewf | grep ifps

Sample:

```
ifps 29463 1 0 Sep23 ? 01:13:27 /awips/GFESuite/primary/bin/run/ifpServer -D ...
ifps 29840 1 0 Sep23 ? 00:00:17 ifpServerWatcher -s lwx -P 98000000 -H px1f -T ...
```

- ii. If any of the above processes are not listed, then start the server(s)

NOTE: You should see ifpServer and ifpServerWatcher processes running.

```
>cd /awips/ifps/primary/bin
>./start_PX_ifps_servers ccc
where ccc is the 3-letter site identifier
```

- b. Verify that the mexwxMonitor started correctly

- (1) On px2 as ifps

- i. Check for mexwxMonitor
>ps -ewf | grep mexwxMonitor

Sample:

```
040 S ifps 31749 1 0 75 0 - 655 schedu Nov24 ? 00:00:02
/awips/ifps/primary/bin/mexwxMonitor /awips/adapt/ifps/localbin/ifps-aly.env.
```

- ii. If mexwxMonitor is not listed, then start it

```
>cd /awips/ifps/primary/bin
>./start_mexwxMonitor.sh
/awips/adapt/ifps/localbin/ifps-ccc.env
where ccc is the 3-letter site identifier
```

c. Verify that the IFPS cron files are running

- (1) On ds1 as ifps
 - i. Check for the IFPS cron
`>crontab -l`
 - ii. If the cron is not listed, then start it
`>cd /awips/adapt/ifps/crontab`
`>crontab ifps-ccc.crontab`
where ccc is the 3-letter site identification
- (2) On px1 as ifps (if you **DO NOT** have the DX and NAS installed)
 - i. Check for the IFPS cron
`>crontab -l`
 - ii. If the cron is not listed, then configure and register it as user root
`>su - root`
`>cd /etc/cluster`
`>config.crontabs.px`
`>register.crontabs.px`
- (3) **-OR-** On px1 as ifps (if you **DO** have the DX and NAS installed)
 - i. Check for the IFPS cron
`>grep ifps /etc/cron.d/px1cron`
 - ii. If no ifps processes are listed, then configure and register it as user root
`>su - root`
`>/awips/ops/bin/hb_config_crontabs`
`>/awips/ops/bin/hb_halt px1apps`
`>/awips/ops/bin/hb_run px1apps`
- (4) On px2 as ifps (if you **DO NOT** have the DX and NAS installed)
 - i. Check for the IFPS cron
`>crontab -l`
 - ii. If the cron is not listed, then configure and register it as user root
`>su - root`
`>cd /etc/cluster`
`>config.crontabs.px`
`>register.crontabs.px`
- (5) **-OR-** On px2 as ifps (if you **DO** have the DX and NAS installed)
 - i. Check for the IFPS cron
`>grep ifps /etc/cron.d/px2cron`
 - ii. If no ifps processes are listed, then configure and register it as user root
`>su - root`
`>/awips/ops/bin/hb_config_crontabs`
`>/awips/ops/bin/hb_halt px2apps`
`>/awips/ops/bin/hb_run px2apps`

3. **New Functionality that could be Configured within IFPS**

- d. Please refer to Section #1 of the IFPS16.2 Release Notes for more details of new functionality added within IFPS16.2. The URL is:

<http://www.nws.noaa.gov/mdl/icwf/IFPS16.2Full/Section1IFPS16.2RlseNotes.pdf>

4. **Export Configuration Data**

- a. After successfully **installing**, **testing**, and **configuring** IFPS16.2, it is important that you export your site's configuration data to the NDFD central server. Having your site's latest configuration data available on the NDFD central server will greatly facilitate service backup should your site require it.
- b. **NOTE:** IFPS16.2 WFOs can NOT perform Service Backup for IFPS15.3, IFPS16.0, or IFPS16.1 WFOs. IFPS15.3/16.0/16.1 WFOs can NOT perform Service Backup for IFPS16.2 WFOs.
- c. For more information related to exporting your site's configuration data, please visit the following references in the IFPS16 Users Guide:

http://www.nws.noaa.gov/mdl/icwf/user_guide_ifps16/func/svc_backup_func.htm#Initiating

http://www.nws.noaa.gov/mdl/icwf/user_guide_ifps16/tech/svc_backup_tech.htm#ConfigDataExp

NOTE: If you get an error message indicating your export file is too big, then you may safely remove the following files to create more available space:

- /awips/adapt/ifps/data/*.bp
- /awips/adapt/ifps/data/*.shp
- /awips/adapt/ifps/data/*.shx

PART 4: Deinstall Instructions for IFPS16.2

Part 4 represents the steps necessary to deinstall (if necessary) IFPS16.2. The deinstall is a radical step and should be considered only as a **last resort** to get the site back up and running with IFPS. As a result, any deinstall of IFPS16.2 should be carefully coordinated between the site, regional headquarters, Office of Science and Technology, MDL, FSL, and OCCWS.

NOTE: Any configuration completed since the IFPS16.2 install will be lost upon completing the deinstall. The system will be returned to the state just prior to the IFPS16.2 install. All forecast digital data will be lost and will need to be recreated unless the following steps are followed.

Please follow the directions listed below.

1. Notify the NCF

- a. Before starting the IFPS16.2 de-install, please open a trouble ticket with the NCF. This will alert MDL that you are about to begin your IFPS de-install. Should you require any assistance with the de-install, a trouble ticket will already be opened.

2. Restore IFPS to IFPS15.3

- a. Verify that IFPS and WWA are **NOT** running on any workstation in the office. This includes HP as well as Linux workstations.
- e. Verify that /awips/IFPS_Release_ID indicates that the current version of IFPS is 16.2. If it is not, stop.
- f. Deinstall IFPS16.2.

(1) **Save the Forecast data.** During the deinstall of IFPS16.2, the forecast grids will be lost. In order to prevent this data loss the grids must be manually saved off and then restored when the deinstallation has finished.

- i. Log into **px1** as user **ifps**. Check to see that the ifpsServer and ifpServerWatcher processes are running by typing this command:
`> ps -fu ifps`

If either process is not running, enter these commands, substituting your site id for 'ccc':

```
> cd /awips/ifps/primary/bin
> start_PX_ifps_servers ccc
```

If the processes are running proceed to step ii.

- ii. `> cd /awips/GFESuite/primary/bin`

- iii. Substitute your site id (in upper case) for 'CCC' and note that there are two (2) underscores following 'GRID':

```
> ./ifpnetCDF -o /data/adapt/SaveFcstDB.cdf \
-h px1f -r 98000000 -d CCC_GRID__Fcst_00000000_0000
```

- iv. This will produce a file named SaveFcstDB.cdf in your /awips/GFESuite directory. Verify the file is there, and then exit px1.
- (2) If not already inserted, load the CD labeled "IFPS16.2" into the CD drive on px1
 - (3) Log into a workstation as root, then ssh into the px1
`>ssh px1`
 - (4) Start two windows. One to run the commands and the other to stop the script files.
 - (5) In the first window, if not already mounted, mount the CD drive
`>mount /mnt/cdrom`
`>cd /mnt/cdrom`
 - (6) In the first window, start the script to log install progress
`>ssh dsl -n "touch /data/adapt/inslogs/deinstallIFPS16.2.out"`
`>ssh dsl -n "chmod 777 /data/adapt/inslogs/deinstallIFPS16.2.out"`
`>script -a /data/adapt/inslogs/deinstallIFPS16.2.out`
 - (7) In the first window, run the installIFPS script with a deinstall option (the script may take a second or two, before it sends information to the terminal screen)
`>./installIFPS -d deinstall`
The deinstallation will now start. It should inform you of what is doing by echoing statements to the screen. There may be several steps that may take awhile without displaying any output. Please be patient, and wait for the script to continue.
 - (8) When the first window returns to the command prompt, the deinstallation has finished. Stop install log using this command:
`>exit`

(It will notify you that script has ended with a date/time stamp)
 - (9) In the second window, review the deinstall IFPS16.2 log
`>cd /data/adapt/inslogs`
`>more deinstallIFPS16.2.out`
Look for any errors in the log file. If you have questions about anything related to the de-install process, call the NCF for assistance. When the de-install is completed, please call the NCF and close the trouble ticket you opened to begin this process.
 - (10) **Restore the forecast data.**
 - i. Log into **px1** as user **ifps**. Ensure the ifpServer and ifpServerWatcher processes are running by typing.
`> ps -fu ifps`

If either process is not running perform these two commands, substituting your site id for the 'ccc':
`> cd /awips/ifps/primary/bin`

```
> start_PX_ifps_servers ccc
```

ii.

```
> cd /awips/GFESuite/primary/bin
```

Substitute your site's id (upper case) for the 'CCC' and note that there are two (2) underscores in the following command:

```
> ./iscMosaic -h 1x1 -r 98000000 -d \  
CCC_GRID__Fcst_00000000_0000 -z -n -f \  
/data/adapt/SaveFcstDB.cdf
```

iii. Move the SaveFcstDB.cdf file to the backup directory:

```
> cd /data/adapt  
> mv SaveFcstDB.cdf \  
/data/adapt/ifps/backup/
```

Attachment 1: New/Merge/Replace File List for IFPS16

The table below tracks changes in the IFPS data files and database tables associated with the transition from IFPS15.x to IFPS16

The following **key** is used in the table.

Merge Attempt to preserve edited changes to this file/database table while providing any new information needed for IFPS to run in the IFPS16 environment. The IFP focal point should **back these files up** and **confirm that no site changes were lost during the IFPS16 upgrade.**

Replace/Update This file/database table must be completely replaced in order for IFPS to run in the IFPS16 environment. The IFP focal point should **back these files up** and **be prepared to merge his/her changes into the file once IFPS16 has been installed.**

Delete This file/database table was removed during the IFPS16 install.

New New files/database tables required for IFPS to run in the IFPS16 environment. There is no additional work required. The IFP focal point may have to customize these files, after IFPS16.2 is installed in order for a particular application to work correctly. For IFPS16.2 details and links to IFPS16.2 Release Notes and the IFPS16 User's Guide, go to:

<http://www.nws.noaa.gov/mdl/icwf/IFPS16.2Full/IFPS16.2Full.html>

If a particular file/database table is not mentioned in the report below, assume that no changes are occurring during the IFPS16.2 install.

<u>File/Database Table</u>	<u>Use Key Above</u>
-----------------------------------	-----------------------------

<u>File/Database Table</u>	<u>Use Key Above</u>
~ifps/Xdefaults Config_cat_element Config_cntrl_const Config_fwx_prods Config_nwr_header Config_progroup Config_proinfo Config_wildcard Frmt_ccc Georemap_ccc Gformccc Ics_ccc Igr_ccc Iur Master Modclimo Sliderccc	Delete New Delete Delete Delete Delete Delete Delete Delete New Delete Delete Delete Delete Delete
~ifps/crontab (/awips/adapt/ifps) ifps-ccc.crontab ifps-purge.crontab /awips/ifps/primary ifps-combined.crontab ifps-grdexport.crontab ifps-mosingest.crontab	 New New New New New
~ifps/localbin ifps-ccc.env	 Merge

<u>File/Database Table</u>	<u>Use Key Above</u>
~ifps/data	
MasterLog.dat	Delete
afdsetup.ccc	Delete
aptimes00.ccc	Delete
aptimes12.ccc	Delete
avn_attrbs.dat	Delete
avneditor_setup.dat	Delete
brisk_jfgdir.ccc	Delete
ccf_setup.ccc	Delete
climo	New
cloud_desc.ccc	Delete
colors.dat	Delete
config_bm	New
detail_levels_503.unl	Delete
dfmlabels.dat	Delete
efpc_const.ccc	Delete
eshef_const.ccc	Delete
fixit_breaklock.cfg	Delete
fixit_init.cfg	Delete
fixit_main.cfg	Delete
fixit_marine.cfg	Delete
fixit_selector.cfg	Delete
forced_cities.ccc	Delete
ft_thresh.dat	Delete
fwx_mask.00	Delete
fwx_mask.12	Delete
gele.dat	Delete
georemap_colors.dat	Delete
global_checks.ccc	Delete
grid_control.ccc	Delete
icwf_grid_info.dat	Delete
ifps_Xdef.cfg	Delete
ifps_avn.cfg	New
ifps_custom.cfg	Delete
ifps_edit.cfg	Delete
ifps_eta.cfg	New
ifps_fndtn.cfg	New
ifps_hpc.cfg	New
ifps_init.cfg	New
ifps_main.cfg	New
ifps_mrf.cfg	New
ifps_ngm.cfg	New
ifps_prod.cfg	New

<u>File/Database Table</u>	<u>Use Key Above</u>
ifps_prod_ext.cfg	Delete
ifps_prod_int.cfg	Delete
igr_display_defs.ccc	Delete
init_thresholds.ccc	Delete
jfgdir.ccc	Delete
lexwx_pr.ccc	Delete
logPref.ifpGIF	Delete
logPref.init	Delete
logPref.mexwxMonitor	New
logPref.sexwx	Delete
logPref.slider	Delete
logPref.sliderParmSrv	Delete
logPref.sprayback	Delete
logPref.texwx	Delete
logPref.unld_to_zns	Delete
mar_wx_attrbs.dat	Delete
marine_checks.ccc	Delete
marine_jfgdir.ccc	Delete
marine_mask.00	Delete
marine_mask.12	Delete
marine_missing_checks.ccc	Delete
mask.00	Delete
mask.12	Delete
mask_avn.dat	Delete
mexwxconst.ccc	Delete
multi_tsfp.ccc	Delete
period_layout_saf_503.unl	Delete
period_layout_zfp_503.unl	Delete
periods2cycle.ccc	Delete
phrstrat_const.ccc	Delete
public_checks.ccc	Delete
public_missing_checks.ccc	Delete
snwhidetphr.ccc	Delete
snwlodetphr.ccc	Delete
stimes00.ccc	Delete
stimes12.ccc	Delete
stn_checks.ccc	Delete
template_afd.ccc	Delete
template_afp.ccc	Delete
template_ccf.ccc	Delete
template_ffp.ccc	Delete
template_fwf.ccc	Delete
template_fwm.ccc	Delete
template_fwt.ccc	Delete
template_glf.ccc	Delete

<u>File/Database Table</u>	<u>Use Key Above</u>
template_mfp.ccc template_qps.ccc template_rds.ccc template_rdz.ccc template_sft.ccc template_sft.503.ccc template_zfp.ccc texwx_pr.ccc texwxconst.ccc threshlds.ccc times00.ccc times12.ccc tmpnphr.ccc tmpxphr.ccc tsfp_prefs.ccc tsfp_status.ccc wwa_rcmd_elements.dat wx_attrbs.dat zn_dif_cmb.ccc	Delete Delete Delete Delete Delete Delete Delete Delete Delete Delete Delete Delete Delete Delete Delete Delete Delete Delete Delete Delete
ifps_ccc database cat_element cat_phrases cntrl_const column_descr const_descr dfm_template grid2parms intro_phrases map_associations mexwx_data option_items period_layout probabilities product_gropus wildcards	 Delete Delete Merge Merge Delete Merge Delete Delete Delete Merge Delete Delete Delete Delete Delete Delete
wwa_ccc database recommendations	 Delete

<u>File/Database Table</u>	<u>Use Key Above</u>
~ifps/help/svcbu	
banner_exprtbksiteGrdMode.jpg	New
banner_exprtbksiteGrdToCSMode.jpg	New
banner_exprtGrdMode.jpg	New
banner_exprtMode.jpg	New
banner_imprrtGrdMode.jpg	New
banner_imprrtMode.jpg	New
banner_no_backup.jpg	New
banner_svcbuMode.jpg	New
banner_waitMode.jpg	New
choose_domain.jpg	New
choose_domain_multi1.jpg	New
choose_domain_multi2.jpg	New
failed_site.jpg	New
multi_exprtbksiteGrdMode.jpg	New
multi_exprtbksiteGrdToCSMode.jpg	New
multi_exprtGrdMode.jpg	New
multi_exprtMode.jpg	New
multi_imprrtGrdMode.jpg	New
multi_imprrtMode.jpg	New
multi_no_backup.jpg	New
multi_svcbuMode.jpg	New
multi_waitMode.jpg	New
option_both.jpg	New
option_gfe.jpg	New
option_import_gfe.jpg	New
option_import.jfg	New
option_import_no_gfe.jpg	New
option_none.jpg	New
svcbu_faq.html	New
svcbu_help.html	New
svcbu_instructions.html	New
svcbu_multidom.html	New
xmessage_faq_01.jpg	New
xmessage_faq_02.jpg	New
xmessage_faq_03.jpg	New
xmessage_faq_04.jpg	New
xmessage_faq_05.jpg	New
xmessage_faq_06.jpg	New
xmessage_faq_07.jpg	New
xmessage_faq_08.jpg	New

<u>File/Database Table</u>	<u>Use Key Above</u>
xmessage_faq_09.jpg	New
xmessage_faq_10.jpg	New
xmessage_faq_11.jpg	New
xmessage_faq_12.jpg	New
xmessage_faq_13.jpg	New
xmessage_faq_14.jpg	New
xmessage_faq_15.jpg	New
xmessage_faq_16.jpg	New
xmessage_faq_17.jpg	New
xmessage_faq_18.jpg	New
xmessage_faq_19.jpg	New
xmessage_faq_20.jpg	New
xmessage_faq_21.jpg	New
xmessage_faq_22.jpg	New
xmessage_faq_23.jpg	New
xmessage_faq_24.jpg	New
xmessage_faq_25.jpg	New
xmessage_faq_26.jpg	New
xmessage_faq_27.jpg	New
xmessage_faq_28.jpg	New
xmessage_faq_29.jpg	New
xmessage_faq_30.jpg	New
xmessage_faq_31.jpg	New
xmessage_faq_32.jpg	New
xmessage_faq_33.jpg	New
xmessage_faq_34.jpg	New
xmessage_faq_35.jpg	New
xmessage_faq_36.jpg	New
xmessage_faq_37.jpg	New
xmessage_faq_38.jpg	New
xmessage_faq_39.jpg	New
xmessage_faq_40.jpg	New
xmessage_faq_41.jpg	New
xmessage_faq_42.jpg	New
xmessage_faq_43.jpg	New
xmessage_faq_44.jpg	New
xmessage_faq_45.jpg	New
xmessage_faq_46.jpg	New
xmessage_faq_47.jpg	New
xmessage_faq_48.jpg	New
xmessage_faq_49.jpg	New

The following are some of the executables and scripts in /awips/adapt/ifps/bin/hp and /awips/ifps/primary/bin that have changed with the IFPS16.2 install. If the IFP focal point has made any adjustments to these within /awips/adapt/ifps/localbin, they will need to be **merged**.

- Under /awips/adapt/ifps/bin/hp:

```
$ dump_tdlfs
$ ifps-main.env
$ myschema
$ ndfd_mhs_ds.sh
```

- Under /awips/ifps/primary/bin (NOTE: This directory is NOT mounted, so any changes will need to be made on each PX and LX host):

```
$ Icdf_message
$ MOSInterp
$ ProgressBar.py
$ add_stntwr.sh
$ addmos_stns
$ addmos_stns.bat
$ avn_unldr
$ bpfextract
$ call_export_bksite_grid_data
$ change_cwa
$ check_svcbkup.bat
$ choose_domain
$ cleanup_svbk
$ config_cntrl_const
$ config_forecasters
$ config_geo
$ config_ifps
$ create_firewx
$ create_marine
$ create_progress_dialog
$ createIFPSdatabases
$ createIFPSdatabasesYesterday
$ createNewDatabase
$ do_impert_grd_proc
$ export_GFEconfig_for_svcbkup
$ export_bksite_grid_data
$ export_bksite_grid_data_to_central_server
```

\$ export_datadir_for_svcbkup
\$ export_dtbases
\$ export_files_for_svcbkup
\$ export_grid_data
\$ export_localbin_for_svcbkup
\$ export_svc_backup_data.bat
\$ failed_site.tcl
\$ getwwalist
\$ gform
\$ icwf_msg
\$ ifps_config_menu
\$ ifpServerWatcher
\$ import_GFEconfig_for_svcbkup
\$ import_config_and_grids.bat
\$ import_dtbases
\$ import_files_for_svcbkup
\$ import_grid_data
\$ import_localbin_for_svcbkup
\$ import_svc_backup_data.bat
\$ ingest_stn_guidance.sh
\$ killit
\$ lexwx
\$ list_cwa_changes
\$ mexwx
\$ mexwxMonitor
\$ mk_brt
\$ mk_isc_send
\$ myschema
\$ ndfd_mhs_px.sh
\$ prepare_grib2
\$ proc_imprt_config_data
\$ proc_imprt_grd_data
\$ process_export_svc_backup_data
\$ process_import_svc_backup_data
\$ putwwa
\$ query_options.tcl
\$ retrieve_svc_backup_data
\$ run_as
\$ run_GFE.bat
\$ run_stn_guidance.sh
\$ select_wfos
\$ sendGridsToNDFD.sh
\$ service_backup.bat
\$ service_backup.tcl
\$ start_backup_wwa.bat
\$ start_ifpsSvrWtchr
\$ start_ifps_servers
\$ start_ifps_servers_frm_bksite

```
$ start_imprt_grd
$ start_imprt_grd_frm_bksite
$ start_mexwxMonitor.sh
$ start_wwa.bat
$ stop_ifps_servers
$ stop_ifps_servers_for_svcbkup
$ stop_mexwxMonitor.sh
$ stn_ingest_controller.sh
$ update_cwa_info
$ update_dbdata
$ update_progress_dialog
$ wwaList.py
```

Attachment 2: IFPS16.2 Install Space

NOTE: The install space requirements for IFPS16.2 are outlined in the table below. All sizes are in kilobytes (KB). If you do not have sufficient space in any of the partitions listed below, please contact the NCF at 301-713-9344 for assistance in identifying files that may be safely deleted.

Sites without Multi-domain configuration:

	Host			
Partition	ds1	lx1..lxn	px1	px2
/awips/ifps	-	300,000	300,000	300,000
/awips/GFESuite*	-	1,500,000	1,500,000	-
/awips/adapt	80,000	-	-	-
/data/adapt	1,300,000	-	-	-

Sites with Multi-domain configuration:

	Host			
Partition	ds1	lx1..lxn	px1 & px3	px2 & px4
/awips/ifps	-	300,000	300,000	300,000
/awips/GFESuite*	-	1,500,000	1,500,000	-
/awips/adapt	80,000	-	-	-
/data/adapt	1,300,000	-	-	-

Attachment 3: Sample IFPS Install and Deinstall Log Files

A Sample IFPS Install Log File is available at the following URL:

- <http://www.nws.noaa.gov/mdl/icwf/IFPS16.2Full/installIFPS16.2Full.out>
- <http://www.nws.noaa.gov/mdl/icwf/IFPS16.2Full/deinstallIFPS16.2Full.out>

Attachment 4: Customer Support Team (CST) Contact List

- Carl.McCalla@noaa.gov
(301) 713-1065 x 169
- Iris.Boon@noaa.gov
(301) 713-0224 x 145
- James.Calkins@noaa.gov
(301) 713-0056 x 148